

# SUBJECT INDEX

<b>CORRIGENDUM</b>	<b>214</b>	R. Fagin and J. Y. Halpern—Reasoning about Knowledge and Probability
<b>DEDICATION</b>	<b>751</b>	In Memorium—Paris C. Kanellakis
<b>EDITORIAL</b>	<b>379</b>	J. Y. Halpern—Time to Publication: A Progress Report
<b>COMPLEXITY OF ALGORITHMS</b>	<b>753</b>	S. Arora—Polynomial Time Approximation Schemes for Euclidean Traveling Salesman and Other Geometric Problems
	<b>215</b>	X. Deng, T. Kameda, and C. Papadimitriou—How to Learn an Unknown Environment I: The Rectilinear Case
	<b>246</b>	D. Karger, R. Motwani, and M. Sudan—Approximate Graph Coloring by Semidefinite Programming
<b>COMPUTATIONAL GEOMETRY</b>	<b>891</b>	S. Arya, D. M. Mount, N. S. Netanyahu, R. Silverman, and A. Y. Wu—An Optimal Algorithm for Approximate Nearest Neighbor Searching in Fixed Dimensions
	<b>266</b>	T. K. Dey and S. Guha—Computing Homology Groups of Simplicial Complexes in $R^3$
	<b>924</b>	M. Pellegrini—Electrostatic Fields without Singularities: Theory, Algorithms and Error Analysis
<b>COMPUTER ARCHITECTURE</b>	<b>557</b>	F. Pong and M. Dubois—Formal Verification of Complex Coherence Protocols Using Symbolic State Models
<b>COMPUTER SYSTEM MODELING AND ANALYSIS</b>	<b>381</b>	P. Fernandes, B. Plateau, and W. J. Stewart—Efficient Descriptor-Vector Multiplications in Stochastic Automata Networks
<b>CRYPTOLOGY</b>	<b>965</b>	B. Chor, O. Goldreich, E. Kushilevitz, and M. Sudan—Private Information Retrieval
<b>DATA STRUCTURE AND ANALYSIS OF ALGORITHMS</b>	<b>783</b>	A. V. Goldberg and S. Rao—Beyond the Flow Decomposition Barrier
	<b>288</b>	C. Martínez and S. Roura—Randomized Binary Search Trees
<b>DATABASE THEORY</b>	<b>798</b>	S. Abiteboul and P. C. Kanellakis—Object Identity as a Query Language Primitive
	<b>1</b>	M. Benedikt, G. Dong, L. Libkin, and L. Wong—Relational Expressive Power of Constraint Query Languages
	<b>588</b>	M. Kifer—On the Decidability and Axiomatization of Query Finiteness in Deductive Databases
<b>DISTRIBUTED COMPUTING</b>	<b>415</b>	J. Aspnes—Lower Bounds for Distributed Coin-Flipping and Randomized Consensus
	<b>35</b>	A. Fekete, M. F. Kaashoek, and N. Lynch—Implementing Sequentially Consistent Shared Objects using Broadcast and Point-To-Point Communication
	<b>843</b>	F. Fich, M. Herlihy, and N. Shavit—On the Space Complexity of Randomized Synchronization
	<b>451</b>	P. Jayanti, T. D. Chandra, and S. Toueg—Fault-Tolerant Wait-Free Shared Objects
<b>FORMAL LANGUAGES AND COMPLEXITY THEORY</b>	<b>501</b>	S. Arora, C. Lund, R. Motwani, M. Sudan, and M. Szegedy—Proof Verification and the Hardness of Approximation Problems
	<b>70</b>	S. Arora and S. Safra—Probabilistic Checking of Proofs: A New Characterization of NP
	<b>634</b>	U. Feige—A Threshold of $\ln n$ for Approximating Set Cover

# SUBJECT INDEX

<b>CORRIGENDUM</b>	<b>214</b>	R. Fagin and J. Y. Halpern—Reasoning about Knowledge and Probability
<b>DEDICATION</b>	<b>751</b>	In Memorium—Paris C. Kanellakis
<b>EDITORIAL</b>	<b>379</b>	J. Y. Halpern—Time to Publication: A Progress Report
<b>COMPLEXITY OF ALGORITHMS</b>	<b>753</b>	S. Arora—Polynomial Time Approximation Schemes for Euclidean Traveling Salesman and Other Geometric Problems
	<b>215</b>	X. Deng, T. Kameda, and C. Papadimitriou—How to Learn an Unknown Environment I: The Rectilinear Case
	<b>246</b>	D. Karger, R. Motwani, and M. Sudan—Approximate Graph Coloring by Semidefinite Programming
<b>COMPUTATIONAL GEOMETRY</b>	<b>891</b>	S. Arya, D. M. Mount, N. S. Netanyahu, R. Silverman, and A. Y. Wu—An Optimal Algorithm for Approximate Nearest Neighbor Searching in Fixed Dimensions
	<b>266</b>	T. K. Dey and S. Guha—Computing Homology Groups of Simplicial Complexes in $R^3$
	<b>924</b>	M. Pellegrini—Electrostatic Fields without Singularities: Theory, Algorithms and Error Analysis
<b>COMPUTER ARCHITECTURE</b>	<b>557</b>	F. Pong and M. Dubois—Formal Verification of Complex Coherence Protocols Using Symbolic State Models
<b>COMPUTER SYSTEM MODELING AND ANALYSIS</b>	<b>381</b>	P. Fernandes, B. Plateau, and W. J. Stewart—Efficient Descriptor-Vector Multiplications in Stochastic Automata Networks
<b>CRYPTOLOGY</b>	<b>965</b>	B. Chor, O. Goldreich, E. Kushilevitz, and M. Sudan—Private Information Retrieval
<b>DATA STRUCTURE AND ANALYSIS OF ALGORITHMS</b>	<b>783</b>	A. V. Goldberg and S. Rao—Beyond the Flow Decomposition Barrier
	<b>288</b>	C. Martínez and S. Roura—Randomized Binary Search Trees
<b>DATABASE THEORY</b>	<b>798</b>	S. Abiteboul and P. C. Kanellakis—Object Identity as a Query Language Primitive
	<b>1</b>	M. Benedikt, G. Dong, L. Libkin, and L. Wong—Relational Expressive Power of Constraint Query Languages
	<b>588</b>	M. Kifer—On the Decidability and Axiomatization of Query Finiteness in Deductive Databases
<b>DISTRIBUTED COMPUTING</b>	<b>415</b>	J. Aspnes—Lower Bounds for Distributed Coin-Flipping and Randomized Consensus
	<b>35</b>	A. Fekete, M. F. Kaashoek, and N. Lynch—Implementing Sequentially Consistent Shared Objects using Broadcast and Point-To-Point Communication
	<b>843</b>	F. Fich, M. Herlihy, and N. Shavit—On the Space Complexity of Randomized Synchronization
	<b>451</b>	P. Jayanti, T. D. Chandra, and S. Toueg—Fault-Tolerant Wait-Free Shared Objects
<b>FORMAL LANGUAGES AND COMPLEXITY THEORY</b>	<b>501</b>	S. Arora, C. Lund, R. Motwani, M. Sudan, and M. Szegedy—Proof Verification and the Hardness of Approximation Problems
	<b>70</b>	S. Arora and S. Safra—Probabilistic Checking of Proofs: A New Characterization of NP
	<b>634</b>	U. Feige—A Threshold of $\ln n$ for Approximating Set Cover

	653	O. Goldreich, S. Goldwasser, and D. Ron—Property Testing and Its Connection to Learning and Approximation
	983	M. Kearns—Efficient Noise-Tolerant Learning from Statistical Queries
	123	M. Saks, A. Srinivasan, and S. Zhou—Explicit OR-Dispersers with Polygarithmic Degree
	155	J. Šima and J. Wiedermann—Theory of Neuromata
<b>GRAPH THEORY AND COMBINATORIAL STRUCTURES</b>	179	A. E. Andreev, A. E. F. Clementi, and J. D. P. Rolim—A New General Derandomization Method
<b>LOGIC IN COMPUTER SCIENCE</b>	1007	L. Bachmair and H. Ganzinger—Ordered Chaining Calculi for First-Order Theories of Transitive Relations
<b>MACHINE LEARNING AND COMPUTATIONAL LEARNING</b>	863	N. H. Bshouty, S. A. Goldman, H. D. Mathias, S. Suri, and H. Tamaki—Noise-Tolerant Distribution-Free Learning of General Geometric Concepts
<b>PARALLEL ALGORITHMS</b>	1050	R. M. Karp and Y. Zhang—On Parallel Evaluation of Game Trees
<b>PARALLEL COMPUTATION</b>	324	P. D. MacKenzie, C. G. Plaxton, and R. Rajaraman—On Contention Resolution Protocols and Associated Probabilistic Phenomena

# AUTHOR INDEX

- 751 In Memorium—Paris C. Kanellakis
- ABITEBOUL, S. 798 Object Identity as a Query Language Primitive
- ANDREEV, A. E. 179 A New General Derandomization Method
- ARORA, S. 70 Probabilistic Checking of Proofs: A New Characterization of NP
- 501 Proof Verification and the Hardness of Approximation Problems
- 753 Polynomial Time Approximation Schemes for Euclidean Traveling Salesman and Other Geometric Problems
- ARYA, S. 891 An Optimal Algorithm for Approximate Nearest Neighbor Searching in Fixed Dimensions
- ASPNES, J. 415 Lower Bounds for Distributed Coin-Flipping and Randomized Consensus
- BACHMAIR, L. 1007 Ordered Chaining Calculi for First-Order Theories of Transitive Relations
- BENEDIKT, M. 1 Relational Expressive Power of Constraint Query Languages
- BSHOUTY, N. H. 863 Noise-Tolerant Distribution-Free Learning of General Geometric Concepts
- CHANDRA, T. D. 451 See Jayanti, P.
- CHOR, B. 965 Private Information Retrieval
- CLEMENTI, A. E. F. 179 See Andreev, A. E.
- DENG, X. 215 How to Learn an Unknown Environment I: The Rectilinear Case
- DEY, T. K. 266 Computing Homology Groups of Simplicial Complexes in  $R^3$
- DONG, G. 1 See Benedikt, M.
- DUBOIS, M. 557 See Pong, F.
- FAGIN, R. 214 Reasoning about Knowledge and Probability (corrigendum)
- FEIGE, U. 634 A Threshold of  $\ln n$  for Approximating Set Cover
- FEKETE, A. 35 Implementing Sequentially Consistent Shared Objects using Broadcast and Point-To-Point Communication
- FERNANDES, P. 381 Efficient Descriptor-Vector Multiplications in Stochastic Automata Networks
- FICH, F. 843 On the Space Complexity of Randomized Synchronization
- GANZINGER, H. 1007 See Bachmair, L.
- GOLDBERG, A. V. 783 Beyond the Flow Decomposition Barrier
- GOLDMAN, S. A. 863 See Bshouty, N. H.
- GOLDREICH, O. 653 Property Testing and Its Connection to Learning and Approximation
- 965 See Chor, B.
- GOLDWASSER, S. 653 See Goldreich, O.
- GUHA, S. 266 See Dey, T. K.
- HALPERN, J. Y. 214 See Fagin, R.
- 379 Time to Publication: A Progress Report
- HERLIHY, M. 843 See Fich, F.
- JAYANTI, P. 451 Fault-Tolerant Wait-Free Shared Objects
- KAASHOEK, M. F. 35 See Fekete, A.
- KAMEDA, T. 215 See Deng, X.
- KANELLAKIS, P. C. 798 See Abiteboul, S.
- KARGER, D. 246 Approximate Graph Coloring by Semidefinite Programming
- KARP, R. M. 1050 On Parallel Evaluation of Game Trees
- KEARNS, M. 983 Efficient Noise-Tolerant Learning from Statistical Queries
- KIFER, M. 588 On the Decidability and Axiomatization of Query Finiteness in Deductive Databases
- KUSHILEVITZ, E. 965 See Chor, B.
- LIBKIN, L. 1 See Benedikt, M.
- LUND, C. 501 See Arora, S.—Proof Verification and the Hardness of Approximation Problems

LYNCH, N.	35	See Fekete, A.
MACKENZIE, P. D.	324	On Contention Resolution Protocols and Associated Probabilistic Phenomena
MARTÍNEZ, C.	288	Randomized Binary Search Trees
MATHIAS, H. D.	863	See Bshouty, N. H.
MOTWANI, R.	246	See Karger, D.
	501	See Arora, S.—Proof Verification and the Hardness of Approximation Problems
MOUNT, D. M.	891	See Arya, S.
NETANYAHU, N. S.	891	See Arya, S.
PAPADIMITRIOU, C.	215	See Deng, X.
PELLEGRINI, M.	924	Electrostatic Fields without Singularities: Theory, Algorithms and Error Analysis
		See Fernandes, P.
PLATEAU, B.	381	See MacKenzie, P. D.
PLAXTON, C. G.	324	Formal Verification of Complex Coherence Protocols Using Symbolic State Models
PONG, F.	557	See MacKenzie, P. D.
RAJARAMAN, R.	324	See Goldberg, A. V.
RAO, S.	783	See Andreev, A. E.
ROLIM, J. D. P.	179	See Goldreich, O.
RON, D.	653	See Martínez, C.
ROURA, S.	288	See Arora, S.—Probabilistic Checking of Proofs: A New Characterization of NP
SAFRA, S.	70	Explicit OR-Dispersers with Polygarithmic Degree
SAKS, M.	123	See Fich, F.
SHAVIT, N.	843	See Arya, S.
SILVERMAN, R.	891	Theory of Neuromata
ŠÍMA, J.	155	See Saks, M.
SRINIVASAN, A.	123	See Fernandes, P.
STEWART, W. J.	381	See Karger, D.
SUDAN, M.	246	See Arora, S.—Proof Verification and the Hardness of Approximation Problems
	501	See Chor, B.
	965	See Bshouty, N. H.
SURI, S.	863	See Arora, S.—Proof Verification and the Hardness of Approximation Problems
SZEGEDY, M.	501	See Bshouty, N. H.
TAMAKI, H.	863	See Jayanti, P.
TOUEG, S.	451	See Šíma, J.
WIEDERMANN, J.	155	See Benedikt, M.
WONG, L.	1	See Arya, S.
WU, A. Y.	891	See Karp, R. M.
ZHANG, Y.	1050	See Saks, M.
ZHOU, S.	123	